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REMARKS

Claims 7 and 38-54 are pending in the instant application and stand rejected in the final Office Action. Claims 7 and 38-54 are presented for examination. Applicants respond below to the specific rejections set forth by the Examiner.

Rejections Under 35 U.S.C. § 102(b) - Rath reference

The Examiner has rejected Claims 7, 38, 39, 41, 42, 44-49 and 53 under 35 U.S.C. § 102(b) as being anticipated by Rath (U.S. Patent No. 6,693,129, hereinafter "Rath"). According to the Examiner, Rath discloses a method of treating high LDL and high triglycerides by administering a composition that contains biotin and chromium (as chromium glycinate) in amounts falling within the scope of Applicants' claims. The Examiner asserts that Applicants have not provided evidence that the transition phrase "consisting essentially of" in Claim 7 excludes the additional compounds present in the Rath composition. The Examiner also asserts that "the composition for the treatment indicated [in Rath]" will inherently raise serum HDL cholesterol levels. For the reasons set forth below, Applicants respectfully disagree.

The Rath Composition Includes Compounds Excluded by the phrase "Consisting Essentially of" in Claim 7

Under 35 U.S.C. § 102(b), a claim is anticipated only if the reference reads on the claim. Claim 7 of the present application recites "A method for treating dyslipidemia *consisting essentially of* administering to an individual in need thereof a synergistically effective dose of chromium and biotin. . ." For the reasons set forth below, Rath does not read on Claim 7.

As set forth in Section 2111.03 of the M.P.E.P. and acknowledged by the Examiner, the transitional phrase "consisting essentially of" has a well-established meaning. As correctly noted by the Examiner, the transitional phrase "consisting essentially of" occupies a middle ground between claims that recite the transitional phrase "consisting of," which exclude all materials other than those recited in the claim, and claims that recite the transitional phrase "comprising," which do not exclude additional, unrecited elements. The transitional phrase "consisting essentially of" limits the scope of a claim by excluding additional materials or steps that materially affect the basic and novel characteristics of the invention. *Office Action* at 3-4; *Atlas Pander Co. v. E.I. DuPont de Nemours & Co.*, 750 F.2d 1569, 224 (Fed. Cir. 1998).

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Federal Circuit law dictates that any ingredient that materially alters the basic and novel characteristics, regardless of the nature of the effect, *i.e.*, whether it enhances or otherwise alters those characteristics, is excluded by claims using the phrase "consisting essentially of." *See, e.g., PPG Industries v. Guardian Industries Corp.*, 156 F.3d 1351, 1357 (Fed. Cir. 1998); *American Machine & Foundry Co. v. Liggett & Meyers Tobacco Co.*, 172 F.Supp 12 (D.C.N.J. 1959). Applicants maintain that in the instant case, the basic and novel characteristics of Claim 7, *e.g.* a method of treating dyslipidemia and synergistically raising serum HDL cholesterol levels, are readily apparent from the claims and the specification. Applicants take the position that any compound that has a positive or deleterious effect on serum levels of total cholesterol, LDL cholesterol, triglyceride, or HDL cholesterol materially affects the basic and novel characteristics of Applicants' claimed invention, however, the Examiner argues that "based on the case law", Applicants must demonstrate that one or more of the Rath ingredients Applicants contend are excluded by Claim 7 synergistically affects cholesterol levels compared to chromium or biotin alone. *Office Action* at 5.

Rath discloses a composition and method for lowering plasma Lp(a) levels in humans. The Rath composition is disclosed in Table 1, beginning on Column 6, line 45 and includes no less than thirty-five compounds in addition to biotin and chromium, including niacin, ascorbic acid, arginine, L-carnitine, folic acid, and others. Claim 7 relates to a method of treating dyslipidemia consisting essentially of administering a synergistically effective dose of a chromium/biotin complex to an individual. On the other hand, the Rath composition includes niacin, L-carnitine, ascorbic acid, and numerous other compounds. Applicants previously provided evidence demonstrating that the additional compounds in the Rath composition, *e.g.*, niacin, L-carnitine, ascorbic acid, L-arginine, folic acid and others are bioactive and affect HDL and/or LDL and/or total cholesterol levels. *See, Amendment and Response to Office Action*, mailed November 28, 2005 at 3-4 and Exhibits referenced therein. Applicants previously argued that due to the bioactive nature of the additional components in Rath, the Rath composition fails to meet the limitation of a method for treating dyslipidemia consisting essentially of administering chromium and biotin to an individual in need thereof. *Id.* Some of these compounds are known to synergistically affect cholesterol levels. Applicants submit herewith **Exhibit 1**, a research article entitled "The Synergistic Approach: The Future of Nutrition

Therapy." Crayhon, R. (2001), Townsend Letter for Doctors and Patients. Crayhon teaches that both chromium and niacin are known to lower cholesterol, and that chromium and niacin have a *synergistic* affect on lowering serum cholesterol levels and improving serum total cholesterol/HDL ratios. Crayhon thereby addresses the Examiner's requirement that Applicants demonstrate that at least one ingredient, *i.e.*, niacin, in Rath exhibits a synergistic affect on cholesterol levels and total cholesterol/HDL ratios compared to chromium and biotin alone. Because niacin is excluded by Claim 7, the Rath composition falls outside of the scope of Applicants' claims and cannot anticipate Claim 7 under 35 U.S.C. § 102(b). Applicants respectfully request that the Examiner reconsider and withdraw the rejection under 35 U.S.C. § 102(b).

Rath does not expressly or inherently disclose each and every limitation in Claims 38, 39, 41, 42, 44-49 and 53

Claims 38-54 recite "[a] method for raising serum HDL levels, comprising administering to an individual in need thereof a synergistically effective dose of chromium complex and biotin." Accordingly, Claims 38-54 require the step of identifying an individual in need of raised serum HDL levels. Rath is completely silent regarding serum HDL levels and thereby fails to meet the limitation of the identification of an individual in need of raised serum HDL levels. Nevertheless, according to the Examiner "the prior art method would [] inherently result in increased levels of HDL." *Office Action* at 6. For the reasons set forth below, Applicants' maintain that this rejection is improper.

"A claim limitation is inherent in the prior art if it is necessarily present in the prior art, not merely probably or possibly present." *Akamai Technologies, Inc. v. Cable & Wireless Internet Svcs., Inc.* 344 F.3d 1186 (Fed. Cir. 2003). The Examiner takes the position that Claims 38, 39, 41, 42, 44-49 and 53 are inherently anticipated since "the [Rath] method will inherently raise serum HDL cholesterol levels." *Office Action* at 4. As previously stated, the Rath reference fails to expressly teach the limitation of "administering to an individual in need" of a composition to raise serum HDL levels. Instead of addressing the deficiency in Rath, the Examiner has merely focused on the allegation that the individuals in Rath must have experienced elevated HDL levels. In so doing, the Examiner has failed to give the claim limitation "administering to an individual in need [of raised serum HDL levels]" its proper

weight. The law dictates that in order to establish that Rath is anticipatory, the Examiner has the burden of establishing that the individuals identified in Rath as in need of reduced serum Lp(a) levels, total cholesterol levels, LDL and triglyceride levels would necessarily - not probably or possibly - be in need of a composition that raises serum HDL levels. The Examiner has failed to provide any such evidence. Therefore, the Examiner has failed to set forth the requisite showing to establish that Rath inherently anticipates Claims 38, 39, 41, 42, 44-49 and 53.

Even assuming *arguendo* that the Examiner set forth evidence or reasoning establishing that individuals in Rath necessarily and always would be the same individuals in need of raised HDL levels, Applicants have rebutted the Examiner's showing. Applicants previously presented evidence demonstrating that Lp(a) levels, triglyceride levels, and HDL levels possess biological significance that are independent of each other, as illustrated by the fact that they have been characterized as independent risk factors for various disorders such as coronary heart disease (CHD) and stroke. For example, several studies have determined that elevated triglycerides is a risk factor for both CHD and stroke, irrespective of HDL levels. *See, e.g.*, Assmann et al. and LaRusso L. (previously submitted). This evidence demonstrates that individuals identified in Rath as in need of therapeutic intervention (*i.e.*, those in need of reduced serum Lp(a) levels, total cholesterol levels, LDL and triglyceride levels) would not necessarily be in need of therapeutics to raise serum HDL levels. Likewise, Applicants previously provided evidence that individuals in need of raised serum HDL levels do not necessarily and always need a therapeutic to lower serum LDL levels or triglycerides. *See*, Ginsburg, et al. (previously submitted).

In summary, Applicants respectfully submit that (1) the Examiner has failed to provide evidence to support the determination that "the group of individuals which would benefit from raised serum HDL cholesterol levels. . .are not patentably distinguishable from the. . .population of individuals disclosed in the prior art" (*Office Action* mailed August 30, 2005 at 2), and (2) Applicants' evidence establishes that the groups are patentably distinct. The evidence demonstrates that Rath fails to teach each and every limitation of the rejected claims, either expressly or inherently, which include the step of "administering to an individual in need [of a composition to elevate serum HDL levels]." Therefore, Rath is not anticipatory under 35 U.S.C. § 102(b). Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejections under 35 U.S.C. § 102(b).

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Rejections under 35 U.S.C. § 103(a) - Rath reference

Although not discussed separately from the rejection under 35 U.S.C. § 102(b), the Examiner also rejected Claims 7, 38, 39, 41, 42, 44-49 and 53 under 35 U.S.C. § 103(a) as being obvious in view of Rath.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings of the references. Second, there must be a reasonable expectation of success. Finally, the prior art must teach or suggest all the claim limitations. M.P.E.P. §2143. As discussed below, the differences between Applicants' invention and the Rath disclosure are significant and the reference is not sufficient to support a *prima facie* case of obviousness.

Claim 7

Regarding Claim 7, the Examiner has pointed to no motivation to modify the Rath patent to arrive at the claimed method of treating dyslipidemia or raising serum HDL cholesterol levels. The Rath composition includes over thirty-five ingredients. Nowhere does the Rath reference suggest the desirability or advantages of selecting only two of the almost forty components to treat dyslipidemia or raise serum HDL cholesterol levels as is presently claimed. Applicants maintain that absent impermissible hindsight, it would not have been obvious to select only two bioactive components from the nearly forty components in the Rath composition to arrive at the method of treating dyslipidemia consisting essentially of administering a chromium complex and biotin. The Examiner has failed to point to any such evidence, but instead merely makes the conclusory statement that "[a]ny benefit from reducing the number of active ingredients, does not appear sufficient to establish the non-obviousness of using the combination of ingredients to reduce high LDL and triglycerides." *Office Action* at 6-7. Applicants respectfully submit that the Examiner's statement regarding the benefits of reducing the number of active ingredients in Rath cannot take the place of the requirement that the Examiner show a suggestion or motivation to omit the bioactive ingredients. As such, the rejection under 35 U.S.C. § 103(a) is improper.

Additionally, regarding Claim 7, Applicants submit that the Examiner has not established that the Rath reference meets the second prong of the test for obviousness. Specifically, the Rath reference teaches that a composition comprising several bioactive ingredients has an overall

effect of lowering Lp(a), total cholesterol, LDL cholesterol and triglyceride levels. Rath provides no teaching or suggestion with respect to individual compounds or any combination thereof. Given the disclosure in the Rath reference, therefore, the skilled artisan would not have reason to suspect that from among the several compounds of the Rath combination, the combination of chromium and biotin alone would yield the unexpected synergistic results in raising serum HDL levels taught by Applicants. Accordingly, the skilled artisan would have no reasonable expectation of success.

Finally, as Applicants discuss in reference to the rejection under 35 U.S.C. § 102(b), Rath simply fails to teach or suggest all of the claim limitations in Claim 7. As discussed above, Claim 7 recites a method of treating dyslipidemia or raising serum HDL levels consisting essentially of administering a chromium complex and biotin. As noted above, Claim 7 excludes compounds such as niacin, Vitamin C, and others that are present in the Rath composition. This limitation is nowhere taught or suggested in Rath. As such, Rath cannot support a *prima facie* case of obviousness for Claim 7. Applicants respectfully request that the Examiner reconsider and withdraw the rejection of Claim 7 under 35 U.S.C. § 103(a).

Claims 38, 39, 41, 42, 44-49 and 53

The Rath reference likewise does not satisfy each of the requirements required to render Claims 38, 39, 41, 42, 44-49 and 53 obvious under 35 U.S.C. § 103(a). Rath fails to teach each and every limitation of Claims 38, 39, 41, 42, 44-49 and 53. As described in reference to the inherency rejection under 35 U.S.C. § 102(b), Rath fails to expressly or inherently teach the step of "administering a composition to an individual in need [of a composition to raise serum HDL levels]," as recited in the Claims. The Examiner has failed to meet the burden of showing that individuals in need of lowered serum LDL cholesterol, lowered Lp(a) and lowered triglycerides are necessarily and always in need of treatment to raise serum HDL cholesterol levels. Applicants have provided evidence that LDL cholesterol, total cholesterol, triglyceride levels and HDL levels are distinct indicators of several disorders, and that it is recognized in the art that these measurements do not always correlate with increased risk for certain diseases and disorders. As such, individuals in need of lowered LDL, total cholesterol, triglyceride and Lp(a) levels are not always in need of treatment to raise serum HDL levels. Accordingly, Applicants

respectfully request that the Examiner reconsider and withdraw the rejection under 35 U.S.C. § 103(a).

Rejection Under 35 U.S.C. § 102(b) - McCarty Reference

The Examiner has maintained the rejection of Claims 7, 38-50, 53, and 54 under 35 U.S.C. § 102(b) as anticipated by McCarty et al. (U.S. Patent 5,929,066, "McCarty"). In particular, the Examiner alleges that McCarty discloses a method for reducing hyperglycemia and stabilizing the level of serum glucose by administering a synergistically effective amount of chromium complex and biotin falling within the scope of the present claims. The Examiner points to U.S. Patent 6,140,304 to Sears ("Sears") as evidence that "it is inherent that reducing hyperglycemia and stabilizing the level of serum glucose will treat dyslipidemia and increase HDL cholesterol levels." *Office Action* at 7. Applicants respectfully disagree.

Applicants submit herewith **Exhibit 2**, a Declaration of James Komorowski under 37 C.F.R. § 1.132, an expert in the field of metabolic diseases and disorders. Mr. Komorowski testifies that "[m]any of the currently FDA approved drugs used for reducing hyperglycemia and stabilizing the levels of serum glucose are known to either not affect dyslipidemia or even make dyslipidemia worse, *e.g.*, by increasing LDL levels." Komorowski Decl., ¶7. For example, studies have shown that individuals receiving the insulin-sensitizing drug pioglitazone exhibit increased triglycerides and decreased HDL cholesterol levels. *Id.* at ¶8 and references cited therein. Studies have also shown that the widely-used anti-hyperglycemic drug metformin significantly improves glucose control, but has no significant effect on triglycerides or HDL cholesterol levels. *Id.* at ¶9, and references cited therein. It has also been shown that individuals receiving the insulin sensitizing drug rosiglitazone show improved glucose control but significantly increased total cholesterol levels, and no significant change in HDL levels. Other studies have shown that rosiglitazone results in a dose-dependent increase in total and LDL cholesterol levels in diabetic individuals. This evidence demonstrates that, contrary to the Examiner's assertion, it is not inherent that reducing hyperglycemia or stabilizing serum glucose levels will treat dyslipidemia and increase HDL cholesterol levels.

Furthermore, in order to establish that McCarty inherently anticipates Claims 7, 38-50, 53, and 54, the Examiner must establish that McCarty, which discloses the step of administration of chromium and biotin to individuals in need of reducing hyperglycemia and/or stabilizing

serum glucose levels, necessarily and always performed the steps of "identifying an individual in need of [treatment of dyslipidemia]" (Claim 7) or "identifying an individual in need of [treatment of raising serum HDL levels]". (Claims 38-50, 53, and 54). The Examiner relies upon Sears as evidence that McCarty inherently discloses such steps. Applicants disagree.

Sears merely states that Type II diabetes is associated with hyperinsulemia and that "hyperinsulemia is associated with increased triglycerides, decreased HDL cholesterol levels, and elevated percent body fat." Sears, at Col. 12, lines 63-66. The Examiner is relying on the mere association of the condition of *hyperinsulemia* and altered lipid profiles as proof that identifying someone an individual with Type II diabetes necessarily and always identifies individual in need of treatment of dyslipidemia and in need of increased HDL cholesterol levels. However, Sears does not teach that Type II diabetes or hyperiglycemia is a cause of dyslipidemia. The mere association of the two conditions does not support the conclusion that "it is inherent that reducing hyperglycemia and stabilizing the level of serum glucose will treat dyslipidemia and increase HDL cholesterol levels." *Office Action* at 7. The mere coincidence of symptoms does not establish a causal connection between them.

Applicants previously argued that at most, the Examiner has provided evidence that hyperinsulemia and dyslipidemia are associated. However, this does not rise to the level required to establish inherency. In response, the Examiner relies on *In re Novitski* for the position that no evidence other than Applicants' own specification is necessary to show that the prior art method reads on the claimed process. However, the facts of *In re Novitski* are distinguishable over the instant facts. The disputed claim in *In re Novitski* related to a method of protecting a plant from plant pathogenic nematodes by inoculation with a particular bacterial species. The prior art disclosed a method that included the steps of inoculating a plant with a particular bacterial strain of the applicants' claimed species. The prior art, however, did not expressly disclose that the bacterial strain possessed nematode-inhibiting properties, nor did it expressly disclose a method for protecting a plant from nematodes. The court held that the claims were non-obvious, but inherently anticipated by the prior art reference because the method disclosed in the prior art "inherently and necessarily constitute[d] a method for protecting a plant from plant pathogenic nematodes." *In re Novitski* 26 USPQ at 1390-1391. (Emphasis added). The properties of a particular bacterial species are inseparable from the bacterium, which is why the court held that

the prior art method necessarily disclosed the claimed method. By contrast, there is no evidence that hyperinsulemia and dyslipidemia are inseparable disorders. At most, there is an association between them. The evidence simply does not establish that a method of treating hyperglycemia necessarily and always treats dyslipidemia or raises serum HDL levels. To the contrary, hyperglycemia is not always associated with elevated levels of triglycerides and decreased HDL levels. See, Roberts, R., (2003), (previously submitted). Thus, McCarty which relates to treating hyperglycemia, fails to disclose, either expressly or inherently, methods that will necessarily treat dyslipidemia or raise serum HDL levels. McCarty also does not disclose, either expressly or inherently, the identification of individuals that are in need of treatment of dyslipidemia, or treatment to raise serum HDL levels.

Applicants have shown that McCarty fails to teach each and every limitation of Applicants' claims and therefore request that the Examiner withdraw the rejection under 35 U.S.C. § 102(b).

Rejection Under 35 U.S.C. § 103(a) - McCarty Reference

The Examiner maintains that Claims 7, 38-50, 53, and 54 are rendered obvious by McCarty, "because the prior art discloses products and uses that contain the same exact ingredients/compositions as that of the claimed invention." *Office Action* at 7. Applicants respectfully disagree.

The Examiner has failed to establish that the rejected claims are *prima facie* obvious over McCarty. First, the Examiner has failed to establish that the cited reference discloses each and every limitation of the claimed invention. As discussed fully in reference to the rejection under 35 U.S.C. § 102(b), McCarty fails to expressly or inherently teach or suggest each and every limitation of Claims 7, 38-50, 53, and 54. In particular, McCarty teaches a method for reducing hyperglycemia. McCarty does not expressly or inherently teach a method of treating dyslipidemia or a method of synergistically raise serum HDL levels. This alone demonstrates that the claimed invention is not obvious over McCarty.

Applicants also submit that the Examiner has failed to establish that the skilled artisan would have a reasonable expectation of success in treating dyslipidemia and raising serum HDL levels, given the disclosure in McCarty. As demonstrated above, hyperglycemia and dyslipidemia are two independent, often unrelated disorders. As such, given the disclosure that

chromium and biotin are useful for treating hyperglycemia, and nothing more, the skilled artisan would not have a reasonable expectation that the same composition would necessarily and always be useful in treating dyslipidemia or raising serum HDL levels. In view of the above, Applicants submit that the Examiner has failed to meet the three-prong test for obviousness set forth in M.P.E.P. §2143. Applicants therefore request that the Examiner withdraw the rejection under 35 U.S.C. § 103(a) over McCarty.

Rejection Under 35 U.S.C. § 103(a) - McCarty, de la Harpe, Brand Miller, Rath and Sears References

The Examiner maintains the rejection of Claims 7 and 38-54 as allegedly being unpatentably obvious over U.S. Patent No. 5,789,401 to McCarty ("the '401 patent) or U.S. Patent 5,929,066 ("McCarty") each in view of U.S. Patent 5,948,772 to de la Harpe et al. ("de la Harpe") and Brand Miller (Am J. Clin. Nutr. (1994))("Brand Miller"), Rath and Sears as presented in previous Office Actions. According to the Examiner, both McCarty and the '401 patent teach pharmaceutical compositions comprising chromic tripicolinate and biotin for reducing hyperglycemia and stabilizing serum glucose levels. The Examiner asserts that Sears discloses that insulin resistance due to hyperinsulemia is commonly associated with increased triglycerides, decreased HDL levels and elevated percent body fat, and that de la Harpe discloses that diabetes is the cause of hypercholesterolemia. Finally, the Examiner states that the Applicants' evidence of synergistic effects is not commensurate in scope with the breadth of the claims.

The Examiner's rejection over the cited references is based on the exact same assumptions as those presented in the 35 U.S.C. § 103(a) rejection over McCarty, i.e., "that one skilled in the art would expect that treating the underlying cause, i.e., diabetes, would be effective in treating the symptom, i.e., hypercholesterolemia." *Office Action* at 10. Emphasis added. Applicants have provided evidence that, to the contrary, it is likely that the skilled artisan would expect that treating hyperglycemia would not be effective in treating hypercholesterolemia. *See,* Komorowski Decl. and references cited therein.

Further, Applicants have established that there is no evidence of record that demonstrates a causal relationship between hyperglycemia and lowered serum HDL levels. The Examiner's mistaken reliance on Sears in support of the causal relationship is discussed above. The

Examiner also argues that "de la Harpe discloses that hypercholesterolemia is present in diabetics. ... Diabetics suffer from ineffective insulin and compromised glucose metabolism which leads to hypercholesterolemia." *Id.* Applicants assert that the teachings of Sears and de la Harpe - alone or in combination with the other cited references - do not provide a causal link between hyperglycemia and lowered HDL levels. The references, which at most establish an association between hyperinsulemia and altered serum lipid levels, are insufficient to establish that chromium and biotin for the reduction of hyperglycemia as taught by McCarty would synergistically raise serum HDL levels.

Applicants previously asserted that the effectiveness of biotin in altering serum lipid levels is found exclusively in Applicants' specification. The Examiner disagrees, arguing that "the effectiveness of biotin in altering serum lipid levels in [*sic*] not found exclusively in Applicant's specification." *Office Action* at 10. However, the Examiner fails to expressly point to a reference that teaches that biotin - either alone or in combination with chromium - raises serum HDL levels. The Examiner relies on Rath for this teaching. However, as discussed at length, the Rath composition contains several bioactive ingredients known to affect serum lipid levels. One cannot draw the conclusion from these teachings that from among the over thirty-five compounds in the Rath composition, biotin, or biotin in combination with chromium, would synergistically alter serum lipid levels. This line of reasoning is even more tenuous, given that Rath is completely silent about serum HDL levels. As there is no suggestion that biotin supplementation would affect lipid levels or HDL levels in any way in the cited prior art, the use of biotin in combination with chromium to effect a synergistic elevation in serum HDL levels is not obvious.

In view of the above, Applicants submit that the Examiner has failed to establish a *prima facie* case of obviousness, and request that the Examiner withdraw the rejection under 35 U.S.C. § 103(a).

Applicants have rebutted any *prima facie* case of obviousness with unexpected results

Applicants have previously asserted that the synergistic effects of chromium and biotin on HDL levels is unexpected. The Examiner maintains, however, that the McCarty references disclose that the combination of biotin and chromium complex results in synergistic effects, and concludes that "it is expected from the prior art that the combination of chromium complex and

biotin would result in increased HDL cholesterol levels." *Office Action* at 9. The Examiner also argues that only specific amounts of chromium and biotin are tested, and that the evidence of synergy is not commensurate in scope with the breadth of the claims. Applicants disagree.

As discussed above, the teachings of the McCarty references are limited to methods of reducing hyperglycemia and stabilizing serum glucose levels. The Examiner correctly asserts that the McCarty references disclose a synergistic effect of biotin and chromium. However, the synergistic effects reported in the McCarty references are in reducing hyperglycemia. Applicants assert that given the teachings of McCarty, the skilled artisan would not expect that the synergistic effects seen in treating hyperglycemia would translate into synergistic effects on raising serum HDL levels. Applicants maintain the position that the two conditions (i.e., hyperglycemia and lowered serum HDL levels) are not necessarily causally related. Nevertheless, even if this were the case, which Applicants maintain it is not, the skilled artisan would not necessarily expect a one-to-one correlation of the effects on different physiological processes and pathways. In other words, given that a composition exhibits a synergistic effect on one physiological process, there is no reasonable expectation that the same composition would have the same synergistic effects on a different physiological process. Accordingly, the skilled artisan would not expect the synergistic elevation in HDL levels, given the teachings of the McCarty references, which deal solely with serum glucose levels.

Applicants' evidence of synergistic results in elevating serum HDL levels is found in Figure 14 of the specification. Figure 14 provides data from experiments in which differing amounts of chromium and biotin were administered to animals. The data illustrates the synergistic effects of chromium and biotin on changes in HDL levels. In particular, Figure 14 illustrates that all combinations of chromium and biotin tested synergistically elevated serum HDL levels (i.e., low chromium/low biotin; low biotin/high chromium; high biotin/low chromium; and high biotin/high chromium), when compared to the same doses of the compounds administered alone. As indicated in paragraph [0110], the nutrients were administered via daily water feeding at a specified dose/kg body weight. Applicants assert that the evidence of synergy is commensurate with the breadth of the claims.

In conclusion, Applicants submit that in view of the totality of the evidence, the Examiner's rejection of the claims as being obvious in view of the cited art is improper.

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Applicants respectfully request that the Examiner reconsider and withdraw the rejections under 35 U.S.C. § 103(a).

Double Patenting

The Examiner has asserted that Claims 1-20 are provisionally rejected as being unpatentably obvious over Claims 7, and 38-54 of co-pending U.S. Patent Application No. 10/090,038. Applicants presume that the Examiner meant to instead state that Claims 7, and 38-54 are provisionally rejected under the doctrine of non-statutory double patenting as being unpatentably obvious over Claims 1-20 of co-pending U.S. Patent Application No. 11/136,794. Applicants will address this rejection, for example, by filing a terminal disclaimer, when the instant claims are allowed and no other rejections remain.

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully maintain that the claims are patentable and request that they be passed to issue. Applicants invite the Examiner to call the undersigned if any remaining issues may be resolved by telephone.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: June 7, 2006

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